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## UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

Page \_\_1\_\_ of \_\_2\_

PATENT NO. : 7,657,748 B2

APPLICATION NO.: 10/521,741

ISSUE DATE : February 2, 2010

INVENTOR(S) : Craig B. Gentry

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 8, Line 34: delete "(PKB, SKB)"; insert -- (PKB, SKB)--.

Column 8, Line 44: delete the word "params"; insert --params--.

Column 8, Line 45: delete the words "masks S"; insert --masks s--.

Column 8, Line 46: delete the word "ID"; insert --ID--.

Column 8, Line 50 & 51: delete the words "s, params and ID"; insert --s, params and ID--.

Column 8, Line 52: delete the word "ID"; insert -- ID--.

Column 8. Line 54: delete the words "params, ID and M": insert --params, ID and M--

Column 8. Line 55: delete the words "C to recover M": insert -- C to recover M--

Column 10, Line 61 & 62: delete "ê(P, P)abc if P, aP, bP, and cP are known, but a, b, and c are

insert  $-\hat{e}(P, P)^{abc}$  if P, aP, bP, and cP are known, but a, b, and c are not-Column 10, Line 64 & 65: delete " $\hat{e}(P, P)^{abc} = \hat{e}(abP, cP)$ ";

 $\begin{array}{c} insert -- \hat{e}(P,P)^{abc} = \hat{e}(abP,cP) -- \\ Column 10, Line 66 \& 67: \ delete "g= \hat{e}(P,P), \ then \ g^{abc} = g^{ab})^c \ where \ g^{ab} = \hat{e}(aP,bP) \ and \ g^c = \hat{e}(P,P). \end{array}$ 

cP)" insert  $-g = \hat{e}(P, P)$ , then  $e^{abc} = (e^{ab})^c$  where  $e^{abc} = \hat{e}(aP, bP)$  and  $e^{c} = \hat{e}(P, cP)$ -

Column 11, Line 48: delete "C = [rP, M  $\oplus$  H<sub>2</sub>(g')], where g=ê(Q, P<sub>B</sub>) $\in$  G<sub>2</sub>";

insert -- C = [rP, M $\oplus$ H<sub>2</sub>(g<sup>r</sup>)], where g = ê(Q, P<sub>B</sub>)ê(s<sub>B</sub>P, P'<sub>B</sub>) $\in$  G<sub>2</sub>--

Column 12, Line 59: delete the word "params"; insert --params--.

Column 13, Line 39: delete the word "params"; insert --params--.

MAILING ADDRESS OF SENDER (Please do not use customer number below):

Michael Shenker Haynes and Boone, LLP IP Section 2323 Victory Avenue, Suite 700

Dallas, Texas 75219

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ISSUE DATE : February 2, 2010

INVENTOR(S) : Craig B. Gentry

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 13, Line 43: delete the word "Musing"; insert -- Musing--

Column 15, Line 7: delete the word "sendery"; insert --sender y--

Column 15, Line 11: delete the word "sendery"; insert --sender y--

Column 15, Line 60; delete "m-1+1"; insert --m-l+1--

Column 15, Line 66; delete "1-1"; insert -- 1-1--

Column 16, Line 10: delete "n-1+1"; insert --n-l+1--

Column 16, Line 17: delete "1-1"; insert --1-1--

Column 16, Line 25: delete "n-1"; insert --n-l--

Column 19, Line 37: delete "sendery"; insert --sender y--

Column 20, Line 19: delete " $U_1=rP_{zi}$  for  $k+1 \le I \le n+1$ "; insert --  $U_i=rP_{zi}$  for  $l+1 \le i \le n+1$ --

Column 24, Line 40: delete the word "params"; insert --params--.

Claim 80 line 8 (Column 38, Line 11): delete "key!recipient"; insert --key/recipient--.

Claim 80 line 21 (Column 38, Line 24): delete "key!private"; insert --key/private--.

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